

# PROTECT OUR LAKES AND STREAMS HELP STOP POLLUTED RUNOFF



Few places have as many lakes and streams as Wisconsin.

In fact, many of us choose to live here or travel from afar to enjoy these waters, which are treasured destinations for fishing, swimming, boating, wildlife viewing, and other outdoor activities.

## SEDIMENTS & NUTRIENTS

Our lakes and streams are also destinations for water running off the land from farm fields, lawns, parking lots, streets, rooftops, and many other surfaces. This runoff may be clean or polluted, depending on how we care for the land around our homes and in our communities. Sediments and nutrients in the runoff water are the two main causes of the problems we see in streams and lakes. The results are all too familiar: algae and weed-choked lakes, muddy rivers, and an overabundance of nuisance species like carp in our favorite fishing waters.

Runoff pollution harms fish and other animals that depend on clean water. When the water becomes too polluted, some critters leave to find new homes; others do not survive. Runoff pollution also reduces fishing and swimming opportunities for all of us.

**If your favorite lake or stream is not as healthy or beautiful as it once was, it might be suffering from runoff pollution.**

## TAKE SIMPLE STEPS TO CLEAN UP OUR LAKES AND STREAMS

Working together, individuals and communities can take steps to clean up our lakes and streams and restore their natural beauty and recreation potential. When each individual does a little to prevent runoff into streams and lakes, everyone benefits a lot. This factsheet explains how runoff water becomes polluted and how we can fix it.

## WHAT IS POLLUTED RUNOFF?

When rain falls or snow melts, water flows across pavement and farm fields, washing soil particles, pesticides, pet wastes, oil, and other pollutants into local lakes and streams. In the city, these pollutants often wash into storm drains, which run directly into these same waters. This process is called stormwater or runoff pollution.



# SEDIMENTS AND NUTRIENTS CAUSE SERIOUS PROBLEMS



## SEDIMENTS

Sediments are soil particles and other debris washed away from urban neighborhoods, construction sites, stream banks and farmland. When these particles reach lakes and streams they cause serious problems.

## NUTRIENTS

Phosphorus and nitrogen are two nutrients that cause water quality problems in our lakes and streams. They come from sediments, improperly disposed of manure and pet wastes, leaves and grass clippings piled on city streets, improperly maintained septic systems, and misapplications of fertilizers on lawns or farm fields. When these nutrients reach our lakes and streams, they do more than turn the water green.

## POOR FISHING

As sediments fill in the bed of a lake or stream, the water becomes shallower and is heated more by the sun. This causes water temperatures to rise. Over time, cold- and cool-water fish such as trout are replaced by warm-water fish such as carp, making it more difficult for anglers to catch game fish.

## MUDDY WATERWAYS

Sediments cloud the water, making it difficult for fish and other water dwellers to see, feed, breathe, and lay their eggs. The reduced visibility also increases the chances that boats may run aground or hit underwater hazards. Swimmers find muddy water undesirable and potentially dangerous if deep holes are filled with loose sediment.

## FISH CONSUMPTION ADVISORIES

Sediments carry and store toxic materials that can contaminate small animals. When fish and waterfowl eat the contaminated critters, the toxins can build up in their bodies and cause illnesses, birth defects, and death. Eating fish from polluted waters can also cause health issues for humans.

## BEACH CLOSINGS

Phosphorus from fertilizers, detergents, and decaying debris, such as yard waste, contributes to the over-fertilization of lakes, increasing undesirable weed and algae growth. Excess weeds and algae are harmful to fish. They also make our lakes less attractive for swimming, boating, and other activities.

## FISH KILLS

When manure, pet wastes, leaves, and grass clippings enter a lake or stream, they are broken down (decomposed) by bacteria. The decomposition process reduces oxygen levels in the water and can also release ammonia. Low oxygen levels and ammonia combined with warm temperatures can kill fish and other aquatic life.

## HABITAT LOSS

Excess algae can reduce populations of bottom-rooted plants by blocking sunlight. The bottom-rooted plants provide essential food and habitat for fish and waterfowl.





# WHAT YOU CAN DO

KEEP SEDIMENTS AND NUTRIENTS OUT OF OUR WATERS



## REDIRECT DOWNSPOUTS

Redirect downspouts that drain to your driveway or sidewalk onto grass, or into a rain garden, or collect it in a rain barrel for future use. Minimizing the amount of water that runs into storm drains improves the health of your local lakes and streams.



## COMPOST YARD WASTE

Keep yard waste and leaves out of the street and out of the storm drains. Compost leaves and yard waste at home, take them to a community composting site, or simply allow the grass clippings to remain on the lawn, acting as a natural mulch and keeping your grass healthy.



## SWEEP UP DEBRIS

Sweep fertilizer, soil, and other debris from sidewalks and driveways instead of hosing them off. The flowing water will wash the pollutants into streams, rivers, and lakes. Wash your car on the grass rather than in the street so the soapy water does not flow directly into the storm drain.



## PLANT BUFFERS

Protect waterways by maintaining undisturbed vegetation where sediment can be captured from farm fields and shoreline properties before reaching open water.



## TEST SOIL

Test your soil before adding fertilizer to your lawn or garden. Follow the directions when applying fertilizer. More is not better since the excess nutrients can wash away into lakes and streams.



## CONTROL EROSION

Use straw to control erosion if restarting or tilling a lawn to hold loose soil in place and keep it from going into the storm drain. On farms, plant cover crops and use conservation tillage to hold soil in place.



## PICK UP PET WASTE

Pick up your pet waste and dispose of it in the garbage. Pet waste contains bacteria, parasites, nitrogen, and phosphorous, and can spread disease and increase algae growth.



## MANAGE MANURE

On farms, store and spread manure away from open water to prevent excess nutrients from getting into waterways.

# EVERYONE CAN TAKE STEPS TO IMPROVE WATER QUALITY

We don't have to settle for streams and lakes that are brown with sediment and green with algae.

## MORE INFORMATION

For more information about runoff pollution and what you can do to prevent it, contact:

Your County Extension Office

<http://www.uwex.edu/ces/cty/>

Wisconsin Department of Natural Resources

<http://dnr.wi.gov/topic/Nonpoint>

Environmental Resources Center Publications

<http://clean-water.uwex.edu/pubs/>

Wisconsin's Runoff Info

<http://runoffinfo.uwex.edu/>



## AUTHOR

Peggy Compton, Natural Resources Educator  
UW-Extension Environmental Resources Center

## CONTRIBUTING AUTHORS

John Exo, Kris Tiles, and Andy Yench, Natural Resources Educators  
UW-Extension Environmental Resources Center

## PHOTOGRAPHS

Peggy Compton, Sarah Congdon, Paul Ohlrogge, Kris Tiles, John F. Walte,  
Andy Yench, Matt Zoschke, and Minnesota Pollution Control Agency



Copyright © 2013 by the Board of Regents of the University of Wisconsin System doing business as the division of Cooperative Extension of the University of Wisconsin-Extension. All rights reserved. Send copyright inquiries to: Cooperative Extension Publishing, 432 N. Lake St., Rm. 227, Madison, WI 53706, [pubs@uwex.edu](mailto:pubs@uwex.edu).



Cooperative Extension publications are subject to peer review.

University of Wisconsin-Extension, Cooperative Extension, in cooperation with the U.S. Department of Agriculture and Wisconsin counties, publishes this information to further the purpose of the May 8 and June 30, 1914, Acts of Congress. An EEO/AA employer, the University of Wisconsin-Extension, Cooperative Extension provides equal opportunities in employment and programming, including Title IX and ADA requirements. If you need this information in an alternative format, contact Equal Opportunity and Diversity Programs, University of Wisconsin-Extension, 432 N. Lake St., Rm. 501, Madison, WI 53706, [diversity@uwex.edu](mailto:diversity@uwex.edu), phone: (608) 262-0277, fax: (608) 262-8404, TTY: 711 Wisconsin Relay.

This publication is available from your county UW-Extension office ([www.uwex.edu/ces/cty/](http://www.uwex.edu/ces/cty/)), from Cooperative Extension Publishing (to order, call toll-free: 1-877-947-7827 [WIS-PUBS] or visit this website: [learningstore.uwex.edu](http://learningstore.uwex.edu)), and it is available from DNR Service Centers.

Editorial assistance by Bruce Webendorfer  
and graphic design by Sarah Congdon,  
UW-Extension Environmental Resources Center

Protect Our Lakes and Streams, Help Stop Polluted Runoff  
**UWEX Publications GWQ063 10-2013**  
**DNR PUB-WT-1000 2013**